Louisiana-Pacific Corporation **Aroostook County** **New Limerick, Maine** **A-327-70-F-A**	**Departmental** **Findings of Fact and Order** **Part 70 Air Emission License** **Amendment #5**

After review of the Part 70 Major Modification application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A, Section 344 and Section 590, the Department finds the following facts:

I. Registration

A. Introduction

FACILITY	Louisiana-Pacific Corporation (LP)
INITIAL LICENSE NUMBER	A-327-70-A-I
LICENSE TYPE	Part 70 Major Modification
NAIC CODES	321219
NATURE OF BUSINESS	Oriented Strand Board Manufacturer
FACILITY LOCATION	240 Station Road, New Limerick, Maine
DATE OF INITIAL LICENSE ISSUANCE	December 19, 2000
DATE OF PART 70 MAJOR MODIFICATION	August 16, 2004
LICENSE EXPIRATION DATE	December 19, 2005

B. Description of Part 70 Major Modification

LP currently operates a Regenerative Thermal Oxidizer (RTO) to reduce VOC emissions from the press at the New Limerick facility. LP is proposing to convert the oxidation system to a Regenerative Catalytic Oxidizer (RCO) by adding catalyst-impregnated materials on top of the existing ceramic saddles of the RTO and modifying the valving system. The basic operation of the RCO system will be essentially the same as the current RTO system, with the main difference being lower oxidation temperatures. The reduction of the combustion temperature into the oxidation system will raise the overall thermal efficiency and reduce the amount of fuel required to operate the unit.

Although LP plans to operate the oxidation system for the press as an RCO, LP requires the flexibility to also operate the system as an RTO. This operational flexibility will allow LP to continue to run the New Limerick plant should the catalyst become inactivated or accidentally fouled.

LP is licensed to fire either propane or natural gas in the existing press vent RTO. The maximum heat input capacity for the RTO is 11.2 MMBtu/hr; the maximum firing rate for the two RTO burners combined in 120 gallons per hour. When the RTO is converted to an RCO, the existing burners will continue to be utilized. However, LP will reduce the firing rate of the two burners by inserting an orifice

in the gas inlet line to physically limit the firing rate. When the oxidation system is operated as an RCO, the maximum heat input capacity of each burner will be 3.5 MMBtu/hr for a total of 7.0 MMBtu/hr for the unit; the maximum firing rate will be 77.3 gallons per hour for the two burners combined, assuming a heating value of 90,500 BTU/gallon of propane.

Particulate matter and sulfur dioxide emissions are expected to remain the same with the press vent RCO as with the existing RTO. However, because the RCO will require less propane as a combustion fuel, carbon monoxide and nitrogen oxide emissions will be reduced. Based on stack test data from other LP facilities, volatile organic compound (VOC) emissions, specifically formaldehyde, will be slightly higher with the operation of the press vent RCO than with the RTO. However, LP is proposing to retain the short-term VOC emission limit of 1.75 pounds per hour (lb/hr) specified in the current air emission license for the press vent RTO. The RCO will be designed and operated so as to continue to comply with the existing limit. LP will conduct stack testing of VOC emissions (outlet only) within six months of initial activation of the press vent RCO to demonstrate compliance with the 1.75 lb/hr emission limit.

This project will result in no changes to the current annual facility-wide emissions for criteria pollutants. Annual facility-wide emissions of hazardous air pollutants (HAPs) will be increased from 35.25 tons per year (TPY) to 39.68 TPY to account for the possible increase in potential formaldehyde emissions. The difference between current actual formaldehyde emissions from the press vent RTO and future potential emissions from the RCO is approximately 4.5 TPY. Compliance with the revised facility-wide annual HAP emission limitation will be based on the formula specified in the facility's current license with a revised emission factor for the press of 0.041 lb HAP per thousand square feet of board produced.

BPT:

Section 2(W) of MEDEP Chapter 140, Replacement of Air Pollution Control Systems, requires an applicant proposing to replace an existing air pollution control system demonstrate the new control system will achieve Best Practical Treatment (BPT).

The existing RTO was previously determined to be Best Available Control Technology (BACT) for the press and was considered to represent BPT for the press for the initial Part 70 license. Each of the lb/hr emission limits for PM, PM_{10}, SO_2, NO_x, CO and VOCs established for the RTO represent BPT for the press. LP will continue to comply with each of these emission limits with the press vent RCO. Therefore, BPT will be achieved through the use of either an RCO or an RTO for the press.

The only emissions increase as a result of the conversion of the press vent RTO to an RCO is the annual HAP emission limitation. This increase is needed to

account for the anticipated increase in formaldehyde emissions from the press vent with the RCO. LP is expected to be subject to the MACT standards for the Plywood and Composite Wood Products source category to be promulgated in 2004. The proposed MACT will designate RTOs and RCOs as acceptable add-on controls. Therefore an RTO or RCO is considered BPT for formaldehyde.

Periodic Monitoring:

Existing periodic monitoring for the press and for the RCO/RTO will not change as a result of this project. However, one additional stack test will be required to demonstrate compliance of the press vent RCO with the short-term VOC emission limitation.

C. Application Classification

The application for LP does not violate any applicable federal or state requirements and does not increase the source's potential to emit by significant emissions. The application is a Title I modification under the CAA. Therefore, the license amendment is considered to be a Major Modification of a Part 70 source issued under Section 5 of Chapter 140 of the Department's regulations for a Part 70 source.

D. Revised Facility Emissions

Total Annual Emissions for the Facility
(used to calculate the license fee)

Pollutant	**Tons/Year**
PM	156.8
PM_{10}	156.8
SO_2	11.7
NO_x	310.7
CO	917.3
VOC	59.2
Total **HAP**s*	**39.68**

*HAPs included are: Lead, Arsenic, Benzene, Acetaldehyde, Acrolein, Formaldehyde, Methanol and Phenol

ORDER

The Department hereby grants Part 70 Major Modification A-327-70-F-A, subject to the conditions found in Part 70 License A-327-70-A-I, amendments A-327-70-B-M, A-327-70-C-M and A-327-70-D-A and A-327-70-E-A and in the following conditions:

The following shall replace Condition (26) of Part 70 License A-327-70-A-I:

(26) Press Vent RCO/RTO

A. LP is licensed to fire propane or natural gas in the Press Vent RCO/RTO. [MEDEP Chapter 140, BPT] **Enforceable by State-only**

B. The maximum heat input capacity from the firing of propane into the Press Vent RCO shall not exceed 77.3 gal/hr (7.0 MMBtu/hr) demonstrated by flow meter logs or fuel flow recording charts. When the oxidizer system is operated as an RTO, the maximum heat input capacity from the firing of propane shall not exceed 120 gal/hr (11.2 MMBtu/hr). [MEDEP Chapter 140, BPT] **Enforceable by State-only**

C. LP shall maintain records of the Press Vent RCO/RTO hours of operation and propane or natural gas use indicating the quantity of fuel consumed, demonstrated by fuel meter logs. [MEDEP Chapter 140, BPT] **Enforceable by State-only**

D. Emissions from the Press Vent RCO (stack #3) shall not exceed the following limits:

Pollutant	gr/dscf	Origin and Authority
PM	0.015	Federal Consent Decree CV93-0869-L-O

Pollutant	lb/hr	Origin and Authority
PM	12.3	MEDEP Chapter 140, BPT
PM_{10}	12.3	MEDEP Chapter 140, BPT
SO_2	0.2	MEDEP Chapter 140, BPT
NO_X	19.9	MEDEP Chapter 140, BPT
CO	8.2	MEDEP Chapter 140, BPT
VOC	1.75	MEDEP Chapter 140, BPT

E. When the oxidation system is operated as an RTO, emissions from the Press Vent RTO (stack #3) shall not exceed the following limits:

Pollutant	gr/dscf	Origin and Authority
PM	0.015	Federal Consent Decree CV93-0869-L-O

Pollutant	lb/hr	Origin and Authority
PM	12.3	MEDEP Chapter 140, BPT
PM_{10}	12.3	MEDEP Chapter 140, BPT
SO_2	0.2	MEDEP Chapter 140, BPT
NO_X	20.5	MEDEP Chapter 140, BPT
CO	8.3	MEDEP Chapter 140, BPT
VOC	1.75	MEDEP Chapter 140, BPT

The following shall replace Condition (27) of Part 70 License A-327-70-A-I and amendment A-327-70-B-M:

(27) Dryer Vent RTO & Press Vent RCO/RTO Parametric Monitors[MEDEP Chapter 140, BPT]

LP shall maintain and operate the following parameter monitors continuously as part of the Parametric Monitoring Plan required by Federal Consent Decree CV93-0869 and approved by the EPA:

Dryer Vent RTO and Press Vent RCO/RTO combustion chamber temperature. These temperatures shall be maintained above the minimum temperatures at which compliance with specified licensed limits was demonstrated during any emissions testing that demonstrated compliance.

Dryer Vent RTO and Press Vent RCO/RTO outlet air flow monitor. The air flow shall be less than the maximum air flow at which compliance with specified licensed limits was demonstrated during any emissions testing that demonstrated compliance.

Note, “continuous” is defined as: Equally spaced data points with at least one data point for each successive 15-minute period. A minimum of three evenly spaced data points constitutes a valid hour.

Each parameter monitor must record accurate and reliable data. If the parameter monitor is recording accurate and reliable data less than 98% of the source-operating time within any quarter of the calendar year, the Department may initiate enforcement action and may include in that enforcement action any period of time that the parameter monitor was not recording accurate and reliable data during that quarter unless the licensee can demonstrate to the satisfaction of the Department that the failure of the system to record accurate and reliable data was due to the performance of established quality assurance and quality control procedures or unavoidable malfunctions.

The following shall replace Condition (28) of Part 70 License A-327-70-A-I:

(28) Dryer Vent RTO and Press Vent RCO/RTO Periodic Monitoring

LP shall record the Dryer Vent RTO and Press Vent RCO/RTO inlet static pressure once per hour as part of the Parametric Monitoring Plan required by Federal Consent Decree CV93-0869 and approved by the EPA.

LP shall document the opening and closing of the Dryer Vent RTO and Press Vent RCO/RTO isolation dampers as part of the Parametric Monitoring Plan required by Federal Consent Decree CV93-0869 and approved by the EPA.

The following shall replace Condition (34) of Part 70 License A-327-70-A-I:

(34) Visible Emissions from Stack #1, #2, and #3

Visible emissions from Stack #1 (Thermal Oil Heaters), #2 (Dryer Vent RTO), or #3 (Press Vent RCO/RTO) shall not exceed an opacity of 20% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.

For RTO and RCO start-ups during the bake-out process, visible emissions shall not exceed 30% for 2 hours except for 30 minutes which cannot exceed 70%.
[MEDEP Chapter 140, BPT]

The following shall replace Condition (38) of Part 70 License A-327-70-A-I:

(38) LP shall maintain a log detailing maintenance and any malfunctions that occur to all air pollution control equipment along with RCO/RTO bake-out times, dates, and durations shall be kept, and made available to representatives of the Department upon request.
[MEDEP Chapter 140, BPT]

The following shall replace Condition (43) of Part 70 License A-327-70-A-I and amendment A-327-70-D-A:

(43) **Hazardous Air Pollutants**

LP shall limit facility wide HAP emissions to 39.68 tons per year. Compliance shall be based the following:

HAPS from the Thermal Oil Heaters (TOH)

Tons of Biomass burned/year in the TOH X 0.05 lb HAP/Ton of Biomass

Plus

Gallons of #2 fuel oil burned/year in the TOH X 2.24×10^{-6} lb HAP/Gallon of oil

Plus

Gallons of waste oil burned/year in the TOH X 0.0275 lb HAP/Gallon of oil

Plus

HAPS from the Dryers

TFP/year X 0.187 lb HAP/ODT X 1.22 ODT/TFP

Plus

HAPS from the Press

TFP/year X 0.041 lb HAP/MSF X 1.6 MSF/TFP

Plus

HAPS from the Dry Wafer Storage Bin

Hours of operation X 0.615 lb HAP/hr

Plus

HAPS from the Flying Cut-Off Saw

Hours of operation X 1.68 lb HAP/hr

Equals Pounds of HAP emitted. Divide by 2000 to get Tons of HAP emitted.

TFP	=	Tons of Finished Product
ODT	=	Oven Dried Ton
MSF	=	1000 Square Feet

[MEDEP Chapter 140, BPT] **Enforceable by State Only**

The following are new conditions to Part 70 License A-327-70-A-I:

(61) LP shall conduct stack testing for VOC outlet emissions from the Press Vent RCO (Stack #3) following conversion of the oxidation system. Testing shall take place within 6 months of the initial activation of the RCO. Stack testing for VOCs shall follow 40 CFR, Part 60, Appendix A, Method 18, or 25, or 25A, or 25B or other methods approved by the Department.
[MEDEP Chapter 140, BPT]

(62) LP shall perform biennial **VOC** stack testing on the Press Vent RCO (Stack #3). Stack testing for VOCs shall follow 40 CFR, Part 60, Appendix A, Method 18, or 25, or 25A, or 25B or other methods approved by the Department.

A full engineering report shall be prepared for all required stack testing, including an evaluation of test procedures, test results, and source operations. LP shall submit such report to the Bureau of Air Quality within 30 days after testing. All testing programs shall comply with all of the requirements of the DEP compliance stack testing protocol.
[MEDEP Chapter 140, BPT]

(63) LP shall check the activity level of a representative sample of the catalyst at least once every 12 months.
[40 CFR Part 63, Subpart DDDD, MEDEP Chapter 140, BPT]

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-327-70-A-I.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: April 6, 2004
Date of application acceptance: April 8, 2004
Date filed with the Board of Environmental Protection _____

This Order prepared by Mark E. Roberts, Bureau of Air Quality.